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CONTINUOUS AUDITING AS A STRATEGIC TOOL. THE CASE OF PIRAEUS BANK GROUP & THE MERGER OF THE BRANCH NETWORKS OF 7 BANKS

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ΑΘΗΝΑ ΙΟΥΛΙΟΣ, 2018 Αφιερωμένη στους συναδέλφους μου, στους καθηγητές μου, στους γονείς μου αλλά κυρίως στα παιδιά μου και στη σύζυγό μου που πάντα είναι δίπλα μου και με στηρίζει σε όλα τα βήματά μου.

ABSTRACT

Continuous auditing is a useful tool for risk management and the implementation of corrective actions in an organization. The aim of the present research is to examine the concept of continuous auditing in the branches network of Piraeus Bank. For this purpose, e-mail interviews and a questionnaire was used to a sample of 12 Regional Directors and Branch Network General Directors, and 40 managers of Piraeus Bank Branch network respectively. The results of this study have indicated that continuous auditing has a significant contribution in terms of the following: homogeneity in work and the common perception of risks, the cultivation of a risk awareness culture, the protection from potential frauds, and the implementation of corrective actions through transparent information diffusion to the management. However, the time and the staff needed may cause problems in the smooth operation of the bank in terms of servicing customers. Even though continuous auditing was characterized as significant, there is still room for improvements. The respondents indicated the need for more on site and remote controls, the increase of the advisory character of the audit process, the use of technology and the combination of audit process with employee education and training.

Key-words: continuous auditing, risk management, fraud, Piraeus Bank network

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CHAPTER 1. INTRODUCTION

The ongoing testing and monitoring of processes which result in continuous control and assurance are achieved through continuous auditing. According to ISACA (2002, p. 1) "continuous auditing has been defined as a methodology or framework that enables auditors (external and internal) to provide written results on the subject matter using one or a series of reports issued simultaneously. The ability to report on events in a real-time or near real-time environment can provide significant benefits to the users of audit reports". In fact, continuous auditing offer internal audit the ability to collect data that can provide support to various auditing services, such as audit plan development, and follow-up in several issues concerning audit findings (Deloitte, 2010; GTAG, 2015).

Deloitte (2010), however, has argued in a relevant whitepaper that organizations do not implement so much continuous auditing due to two primary reasons: a) the executives have not acknowledged the benefits of such a procedure based on a strong business case and b) there is not a clear and cohere picture of how continuous auditing should be practically implemented. However, continuous auditing offer a number of advantages in the organizations, especially in big financial institutions, such as the Greek banks, which have presence in other countries, as well, and which have a network of thousand branches. For instance, this procedure may enable a bank to be quicker adapter to external changes, providing better customer services, and to design more dynamic audit plans, based on its internal and external environment (Deloitte, 2010).

Based on the above, the aim of the present research is to examine the concept of continuous auditing in the branches network of Piraeus Bank. More precisely, through the mixed method approach, namely the use of both quantitative and qualitative method to general managers and regional managers respectively, and the analysis of secondary data, we will try to answer the following questions:

- 1. What the implementation of continuous audit has offered to the branches network of Piraeus Bank?
- 2. What are the problems raised during the implementation of continuous audit in the bank?

3. Has the implementation of continuous auditing benefited the control environment of the Bank?

Through the conduct of this research is expected to provide evidence that continuous auditing contributed to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank (in terms of culture, system, knowledge management), to the improvement of the control results and the Branches' Internal Control System. Consequently, it is expected to be shown that continuous auditingis also a tool that helps in strategic actions, such as the merger/ acquisition of other entities.

CHAPTER 2. THEORETICAL FOUNDATIONS OF THE STUDY

2.1 The concept of continuous audit

Financial scandals that have occasionally been occurred have highlighted the weakness of many organizations, and in particular the weakness of many internal organizations' internal control systems, while at the same time they have increased attention to internal control and its role and importance. Indeed, the emphasis placed on the failure of the corporate governance of the agencies, i.e. the management and control system of the agencies, has made internal control even more important (Chambers and Odar, 2015). Internal control should be seen within the broader institutional framework in which organizations operate and which includes the rules and system of values and beliefs that are shaped in a wider social context (Arena et al., 2006). For this reason, internal control can be regarded as 'the first line of defense' against corruption, but also fraud scams and mistakes / omissions that have a negative impact on the credibility of the organizations' transparency and thus on peoples' trust on the organization.

The Institute of Internal Auditors defines internal audit as an independent, objective assurance and consultation activity designed to add value and improve the organization's operations (Mihret&Yismaw, 2007; Holt, 2012). Internal audit includes all elements of a business that support people in achieving the organization's goals, facilitates efficient and effective business operations, enabling them to respond appropriately to significant business, operational, financial risks. This includes securing assets from inappropriate use or from loss and fraud (Pantelidis et al., 2011). Internal audit helps an organization to achieve its objectives through a systematic and disciplined approach to assess and improve the effectiveness of risk management and process governance (Mihret&Yismaw, 2007).

Overall, it is a systematic and objective assessment of the different functions of an organization in order to examine and formulate an opinion regarding the following: (a) whether the economic and operational information is accurate and reliable; (b) identifying and minimizing the risks to the organization; (c) the extent to which external regulations and acceptable internal policies and procedures are followed; (d) whether the operational criteria are met; (e) whether resources are used and (f) the organization's objectives have been achieved effectively (Pantelidis et al., 2011).

However, the traditional internal audit is performed on a cyclical and retrospective basis, which means that it is performed only after the occurrence of the business activities, based on the review of procedures, reconciliations etc. Due to this retrospective basis and the time-period that exists between the performance of the business activities and the internal audit, the information provided by the latter may be of little usefulness to the user, taking into account the narrow scope of evaluation that is performed (Coderre, 2005). Within this context, continuous audit, which is a methodological tool used in internal audit (Mainardi, 2011) gives an organization the ability to perform in a more automatic way and frequent basis evaluation concerning control and risk. This means that there is a need for shift from periodic reviews to ongoing assessment, which in addition will be linked to other business activities, such as balanced scorecard, performance monitoring and enterprise risk management (Coderre, 2005).Mainardi (2011) argues that continuous audit is used in internal audit in order to provide assurance that the control structure of an organization's environment is characterized by three components, as it is stated in the following figure.

Figure 1. Components of organization's control structure

Suitable designed: this component refers to the existence of a sufficient level of documented policies and procedures that govern the process flow and the performance of the continuous audit. In addition, there is the need for a specific control activity at each step ensuring that the data are sufficient and the information are valid and has been indeed reviewed. The control activity should be characterized by control upper and low limits that provide a confidence level of accepted performance, used to ensure that the process is efficient, effective and accountable. Finally, the suitable design refers to the existence of policy and procedure standards against which the process of the continuous audit will be measured

Established: this component refers to whether the process flow mentioned in specific policies and procedures is the actual process based on the today business environment, namely meeting the needs and criteria of the current operational environment. This is important since it allows the effectiveness of the audit and the provision of the expected value. One more point considered in this component is the fact that today business should respond immediate (i.e. in little time) in the communication of changes concerning control limits and / or process requirements

Operating as intended: this component refers to whether the process of continuous audit produces results and in fact whether it produces the expected results

There is not a single model for continuous audit. Dal-Ri Murcia et al. (2008) have identified in their literature review three different models, which are depicted in the following table and compared on the basis of accuracy, reliability, timing, reporting method and data format.

	Model of Rezaee et	Model of Onions	Model of		
	al.		Woodroof&Searcy		
Accuracy (fraud and error) within transactions	 Standardized audit tests are built into data marts (running either continuously or at predetermined times) 	 Transactions are checked at time of entry and later GAATTS: real time Expert Systems: continually 	 Rule-based detection by digital agents Data are analyzed by devices integrated system 		
Reliability of internal control systems	 CAATS are used Included Integrated Test Facilities (ITFs) 	 Parsing of keystrokes to detect database management utility Password control, audit logs, operating system's security 	 Adapt and apply SYSTRUST principles Web-based valuation sites Must be in the auditor-defined rules for the digital agents 		
Real-time	• Is the aim of the system	• Run in parallel with operational systems	• Is one of the aims of this model		

Table 1. Comparison of three different continuous audit models

	Model of Rezaee et al.	Model of Onions	Model of Woodroof&Searcy	
Reportingmethod	• Web-enabled data delivered of the auditors workstation, where reports can be generated	 Graded alerts sent through virtual private networks (VPNs) 	• Three levels of reports alerts are sent to the auditor via email	
Proposeddataformat	• Data mart, data warehouse, XBRL	• XCAL, datamarts	• Does not have interface with legacy systems	

Source: Dal-Ri Murcia et al., 2008, p. 368

Last but not least, the differences between continuous audit and continuous monitoring should be mentioned, since many times these two processes are used exchangeable. The following table presents these differences in terms of responsibility, definition and focus.

Table 2. Cont	inuous audit	vs. continuous	monitoring
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	Continuous audit	Continuous monitoring
Responsibility	Internal audit	Business unit management
Definition	Methodology used by auditors to perform control validation on a recurring basis	Management process that assists in meeting its fiduciary responsibilities
Focus	Process that tests selected transactions or key control points based on a predetermined criteria. Part of the assurance process of internal audit responsibilities	Process that verifies acceptable performance based on department or industry standards. Part of the

	ownership responsibilities of
	management

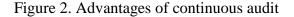
Source: Mainardi, 2011, p. 7

2.2 Advantages of continuous audit

Compared to the traditional audit, continuous audit has the following advantages: a) needs less time to be performed; b) is cost-effective; c) is more accurate and comprehensive (Dal-Ri Murcia et al., 2008).ISACA (2002) mentions that in the case of traditional audit, there is a considerable time-period between the completion of the audit and the issuance of the report, and thus the information presented in the report may be of less usability to the user. Similarly, Alles et al. (2006) argues that continuous audit reduced the delay that exists between the operations of the organization and the provision of assurance.

Internal audit, and thus continuous audit, helps to improve an organization's internal control system, as it leads to value creation through the opportunities it detects, as well as the damage it avoids. In addition, it is stressed that internal audit ensures the transparency of information and contributes to the efficiency of the organization. Overall, it is argued that internal audit adds value to the management of processes and ensures that these processes are efficient and leads to better risk management (Gîrbaci and Mireas, 2011). Particular emphasis is placed on the contribution of internal audit and continuous audit to risk management (de Zwaan et al., 2011; Gîrbaci and Mirea, 2011). Therefore, the internal auditor should provide the necessary assistance to the management of the organization, while also providing information and advice on adequacy, relevance, and improvement of internal risk management processes (de Zwaan et al., 2011). Putting all the above together, continuous audit has the advantage of providing an intelligent and efficient at the same time continuous mechanism for the controls and the risks, resulting in on-time provision of information with regard to weaknesses that may exist in an organization, allowing for direct response. Hence, the internal auditors have the potential to better understand the environment in which the organization operates, to identify the gaps and the risks, and help the organization to better comply with the current needs of various stakeholders and drive its performance (Coderre, 2005).

Alles et al. (2006) mentions some additional advantages of continuous audit: a) auditors have access to data that otherwise it would not be possible; b) adopts a rather real-time monitoring approach; c) it can identify anomalies in the business performance, since it monitors and compares continuously the activities of the organization against expected standards and benchmarks; d) examines continuously a flow of data, thus allowing the modeling of system behavior expanding the analytical methods used in traditional audit, as well as the examination of processes that cannot be assured through traditional audit. Last but not least, continuous audit uses intelligent software tools and this means that the audit is performed almost upon a real-time basis (Dal-Ri Murcia et al., 2008). Overall, the advantages of continuous audit are presented in the figure below.





2.3 Challenges in the implementation of continuous audit

An important issue in the implementation of continuous audit is the fact that many organizations are not ready for this process, either in terms of maturity, or in terms of the appropriate technology (ISACA, 2002). In terms of maturity, ISACA (2002) mentions that maturity refers to process, systems and controls. In the case the strength of the processes and controls of the organization decreases, the cost and time needed for continuous audit increase. In the case the maturity of systems is of high level and the processes and controls of high strength, the organization can better rely on these elements in order to reduce the time and the extent of continuous audit. In terms of technology, ISACA (2002) mentions that sophisticated electronic audit tools and sufficient databases give the auditor the ability to collect and analyze the data needed.

Apart from the above, there are some more issues that should be taken into account when implementing continuous audit (ISACA, 2002). The first is the subject matter, which means the identification of the data (e.g. transactions). The second is the evaluation of the environment, which is related to the strength of processes, systems and controls mentioned above. The third is to consider the nature of the test required, whereas the last is the determination of the appropriate time period that the report covers (reporting period) and that the report is issued (issuance period).

According to Deloitte (2010), issues that should be considered, as they constitute barriers in the implementation of continuous audit are: a) the fact that continuous audit affect the cost, the workload, the plan of internal audit; b) there should be developed a method for the prioritizing of the implementation; c) audit functions should be ready to develop and adopt continuous audit; d) IT experience is important; e) the organization should have realistic expectations from the audit results.

Finally, there are specific principles that should govern the audit report. These principles are as follows (Audit Manual for Audit Bodies and Monitoring and Auditing Services, 2007):

1. Objectivity: the report should be balanced in terms of content and style-neutral, fair and not misleading, and present the results of the audit in their context

- 2. Comprehensive: the report should contain all the information and arguments necessary to respond to audit questions and promote an adequate and correct understanding of the issues and situations described
- 3. Clear: the report should be legible and understandable, and use as simple and non-technical language as possible, provide explanations for acronyms and any technical terms deemed necessary, and avoid ambiguity. The main messages must be clear, relevant and easily identifiable (message clarity) and not lead to misunderstandings
- 4. Convincing: Evidence must be convinced of the validity of the findings, the logic of the conclusions and the benefits that will result from the implementation of the proposals. Findings must be supported by sufficient evidence. The conclusions are logically derived from the findings
- 5. Relevant: the report should respond to the audit questions, its content is important and relevant, and provide new information on the subject of the audit in order to provide timely relevant and up-to-date information
- 6. Exactness: the report should contain true evidence and all findings should be properly worded
- 7. Constructive: the report should help the administration / management overcome or avoid future problems by clearly identifying those responsible for the identified deficiencies and making practical suggestions for improvement
- 8. Brief: the report should not go beyond what is necessary to transmit and support the message

CHAPTER 3. EMPIRICAL ANALYSIS

3.1 Research methodology

"Research methodology consists of the assumptions, postulates, rules, and methods the blueprint or roadmap - that researchers employ to render their work open to analysis, critique, replication, repetition, and/or adaptation and to choose research methods" (Given, 2008, p. 516). This means that research methodology provides a framework (e.g. approach, ethics) for the conduct of the research. There are two methodologies: quantitative and qualitative (Dawson, 2009).

Quantitative methodology aims at generating statistics, through the opinions of a large number of participants, providing a more specific and objective picture of these opinions compared to qualitative research (Dawson, 2009). In addition, quantitative methodology goes from the general to the specific, within the context of deductive approach, compared to qualitative methodology, which focuses on the specific to move towards the general, within the context of inductive approach (Greener, 2008). On the other hand, qualitative research methodology aims at exploring behaviors, attitudes and experiences, through their in-depth opinions (Dawson, 2009). Qualitative research focuses on a specific issue and aims to generate theory from the research conducted to various participants (Greener, 2008), based on the different experiences, behaviors and attitudes that shape participants' points of view (Given, 2008). Last but not least, it is suggested by Tracy (2013) that qualitative methodology is appropriate for studies including organizations.

For the purposes of this study, both research methodologies were chosen. As mentioned, each methodology has specific advantages and limitations. In order to exploit these advantages and overcome the limitations, both qualitative and quantitative research methodologies were applied in this study. In addition, the use of a mixed-method approach has the advantage of triangulation, which means that it can lead to more reliable and valid results (Dawson, 2009).

3.2 Methodological instrument

Within the context of qualitative research, structured interviews were used (Dawson, 2009). This methodological instrument was chosen, since the research wants to obtain

information about a specific subject, without having the need of flexibility, and in an attempt to compare the information gained through the interviews of all the participants. For this reason, there are specific questions, posed at specific order, for all the participants in the research. Due to the fact that the current research wants to answer specific research questions, the structured interview was used as the methodological tool. Through the interview, the researcher has the opportunity to construct a conceptual concept through the interaction with the participants in the research. Through the interview the research can acquire in-depth data concerning the views, attitudes, beliefs and perceptions of participants, based on their personal values, beliefs and experiences. In this way, the research has the possibility of a thorough and comprehensive study and interpretation of the meaning and the importance attached by the respondents to the phenomenon under consideration (Given, 2008; Dawson, 2009).

Within the framework of quantitative research, a structured questionnaire was used. The questionnaire is a methodological tool that is widely used in the context of quantitative research (Perumal, 2014). The questionnaire is a research tool used to collect data from individuals (sample). The questionnaire for this research is structured, as each respondent is asked to answer the same questions in the same order, applying a comprehensive response coding system. The aim in this case is to enable the researcher to ensure that differences in answers to questions can be interpreted as reflecting differences among respondents instead of differences in the processes that produced the answers and for this reason the structured questionnaire was used (Siniscalco&Auriat, 2005).

Both methodological instruments were designed by the researcher specifically for the purposes of this research. Interview consists of seven questions, addressing to Regional Directors and Branch Network General Directors, in order to explore their opinion about Continuous Auditing in the Branches of their responsibility. The questionnaire consists of 15 questions, open-ended and close-ended, addressing to Branch Managers, in order to collect data concerning their opinion about continuous auditing. The interview questions and the questionnaire are presented in the Appendix.

3.3 Sample

The sample of this research consists of managers and executives of Piraeus Bank. Piraeus Bank was founded in 1916. Since then, it has rapidly grown in size and activities, representing today the leading Bank in Greece with 30% market share in terms of loans and deposits. Along with its organic growth, Piraeus Bank has made a series of strategic acquisitions and mergers aiming to establish a strong presence in the domestic market. Specifically, in 2012, Piraeus Bank acquired the "good" part of Agricultural Bank (selected assets and liabilities) and Geniki Bank, a former subsidiary of Societe Generale. In March 2013, Piraeus Bank acquired the Greek banking operations of Bank of Cyprus, Cyprus Popular Bank and Hellenic Bank. In June 2013, Piraeus Bank acquired Millennium Bank Greece, a subsidiary of BCP. In April 2015, Piraeus Bank acquired the carve-out part of Panellinia Bank healthy assets. These transactions comprise important steps towards the restructuring of the Greek banking system, in which Piraeus Bank has participated from the very beginning as a core pillar. After these mergers & acquisitions, Piraeus Bank had become the biggest financial institution in Greece in terms of assets, with a Branch Network of more than 1.200 branches just in Greece in 2013.

In qualitative research the sample is not large and is collected by a particular population. In this study, the purposive sampling method was chosen. This sample is collected according to pre-selected criteria related to a particular research question. In this sampling method, the researcher deliberately selects the sample that will best serve the purposes and the questions of the study. An important disadvantage of this sampling method is that the sample of the survey is not representative of the total population (Eitkan et al., 2016). However, the aim of this research is not to generalize the results of research but to explore the views of managers and executives of Piraeus Bank Branch network.

The size of the sample in quantitative research depends on the available resources and time, as well as on the objectives of the study. In the present study, 40 managers of Piraeus Bank Branch network have participated. In the qualitative research the sample does not consist of a large number of participants, mainly due to time and cost that would be required for data management (collection and analysis) of a large number of

participants (Tongco, 2007; Eitkan et al., 2016).For this reason, 12 Regional Directors and Branch Network General Directors have participated in the research.

3.4 Procedure

At first, the researcher received the informed consent of the participants. Informed consent is a mechanism that ensures that the respondents understand what it means to participate in this research study so they can make a conscious decision if they really want to participate. Informed consent is one of the most important tools for ensuring respect for individuals during the research. The first task of reaching informed consensus is to inform participants about the research in a way that they can understand its aim and significance. This information concerns the following (Given, 2008; Greener, 2008; Dawson, 2009): the identity of the research, the purpose of the research, the time required both for the interview and the questionnaire, the assurance of participants anonymity, the confidentiality of data collected since they will be used only for the purposes of this research, the right of each participant to withdraw at any time from the survey without any negative consequences, the voluntary participants.

Data analysis in the case of qualitative research will be based on comparative analysis. This means that the analysis and interpretation of the data are based upon the comparison of the opinions expressed by the participants in the research (Dawson, 2009). The analysis of the data will be based on the research questions that have been stated. Besides, in-depth interviews are used "in order to discover and explore the range of variation among individuals and to find patterns of similarity and difference" (Given, 2008, p. 524). In other words, for each research question, the answers obtained by the subjects of the research will be presented, and analyzed, in accordance to the bibliography and what has been stated in the previous chapters that constitute the secondary background research, according to Dawson (2009). As Greener (2008) points out, there is a strong linkage between literature review and research, since the researcher can observe whether there are any differences between the findings of one's research and previous studies in the same field, or what the theory postulates about the specific subject under examination.

Data analysis in the case of quantitative research will be performed using statistical analysis via SPSS version 21.0. Greasley (2008) mentions that this program is the most widely used in the case of conducting a quantitative research, as it allows statistical analysis to be carried out through several statistical techniques. Descriptive statistics were used (Greasley, 2008; Perumal, 2014). Descriptive statistics offer the possibility of summarizing information about the data, such as the sample of the survey and the views of the survey participants. Descriptive statistics summarize the data either on the basis of frequencies and percentages or on the basis of mean and standard deviations.

3.5 Results of qualitative research

1. What the implementation of continuous audit has offered to the branches network of Piraeus Bank?

All the participants in the research stressed the great contribution of continuous audit to the branches network. One participant in the research answered that audit's contribution is particularly important, both with its preventive and detective character, since it helped very much in the development of a single function, logic and culture in the network of branches (I9). One more participant in the research also stressed that audit process is particularly important, since it contributes to a constant alertness and ensures the common treatment of risks and functions (I2, I4, I10, I11). In this way, management has the ability to identify and deal promptly with the problems, concentrate on the productive work, as well as to be timely informed about the existing problems identified, taking actions for prevention and therapy at an early stage (I5, I8, I11, I12).

The homogeneity in operation and the increased awareness are two more benefits that were emphasized by many participants in the research. The Bank's network has benefited to a great extent from the logic of continuous audits, since all the branches have understood the concept of risk and the need to keep safeguards and operate homogeneously, with a common audit culture, and with increased awareness about dealing with the risks (I1, I2, I3, I4, I5, I6, I7, I8, I10, I11).

2. How the implementation of continuous auditing has contributed to the absorption of the branch networks from seven different banks by Piraeus Bank?

Some participants in the research pointed out the important contribution of continuous auditing to the systemic and functional integration, through homogeneity in work and the common perception of risks (I5, I8, I12). Additionally, it has cultivated a high sense of protection from potential frauds (I8). Some other participants could not think of another more efficient and effective way to achieve this absorption, in such a short time, so that executives and employees from seven different banks, with different cultures and systems, learn to operate in the same way and under a single culture (I1, I3, I4, I6, I7, I10). Two participants claimed that this derives to a large extent from the advisory role of audit (I3, I7).

Some other participants claimed that continuous audits in the network, as well as the timely updating of the management with the results of these audits, have contributed to the immediate improvement of the audit environment and to the management's decisions that contributed to the smooth integration of the banks and their employees in one single entity (I2, I10, I11). Finally, one more respondent answered that continuous auditing has an important contribution to the systemic and functional integration through direct information that continuous audits offer to the management and allows the immediate implementation of corrective action, along with the advisory nature of audit (I9).

3. What are the problems raised during the implementation of continuous audit in the bank?

Three participants in the research answered that there are no problems during the implementation of continuous audit in the bank (I5, I8, I11). One participant answered that in some cases the problem arises from the focus of the auditees at the expense of the branch productivity (I12). The problem of time was referred by quite few participants in the research (I2, I4, I6, I9, I10). More precisely, it was mentioned that there are problems concerning the deadlines for the follow-up, since often there are a lot of requirements in order to meet different goals (I2, I6, I10) and since there are some periods with increased tasks in the branches (I4, I9) and hence there is not enough time.

Some respondents answered that the large number of audits, especially at the beginning of this process, resulted in a large number of findings (problems) that should be remediated, which needed a lot of time (I1, I6, I7). However, some participants claimed that the whole process had been improved during the last years (I1, I2, I6, I7).

Finally, two other respondents stressed the following two problems: a) some staff members in the branches are often "forcibly" behind the Bank's procedures at the expense of customer service, mentioning the audit control as an alibi (I3); b) the approach of some auditors could be uniformly adapted to the advisory character of the audit process, as well as to the more effective approach of the auditee (I9).

4. Do you think that continuous audit, as it is implemented in your bank, is adequate in order to protect the organization from various risks?

All the participants in the research answered that continuous audit is very effective in terms of protecting the Bank from various risks, since it acts as both preventative and detective (I8). Some of the participants stressed its importance, especially when it is combined with remote audits (I1, I2, I4, I6, I9) that place emphasis upon operational risk scenarios (I1, I4, I9), as well as alerts (I6).

The effectiveness of continuous audit, as it is implemented in the Bank, is reflected on the audits' results, which are improved each year, which indicates that the network of the Bank is effectively protected from various risks (I1, I3, I10, I11). One more indication of audit's effectiveness is the change in employees' mentality, since employees are more able to comprehend the bank's risks (I11). One participant pointed out audit's preventive role in combination with the on-time information offered, which result in immediate corrective actions for remediation (I5). The on-time information that leads directly to the necessary corrective actions was stressed by one more participant in the research (I7), who added that based on the experience so far, it has been indicated that the continuous audit implemented in the Bank is more effective compared to the traditional audit that took place in the whole network in the past years and which was also implemented in other Banks of the same or larger size than Piraeus Bank, with a large and extensive network in Greece. Finally, one more participant in the research claimed that even though it is not possible to eliminate the risks, they can be reduced through the high frequency of audits (I12).

5. In general, how satisfied are you with the whole process?

All the participants in the research answered positively in this question, claiming that they are much (I1, I5, I7, I9, I10, I11) and very much (I2, I3, I4, I6, I8, I12) satisfied with the whole process of continuous auditing. Two participants pointed out that this satisfaction derives primarily from the frequent and analytical feedback received (I3, I11), and one that it derives from the advisory character of auditing (I5).

6. Has the implementation of continuous auditing benefited the audit control of the Bank?

All the participants in the research answered positively to this question, claiming that the implementation of continuous auditing has benefited the Internal Control System of the branches. The results of the audits (I1, I2, I6, I7, I8, I11, I12) and the follow up (I2) indicate a significant improvement during the last years (I2, I4, I6, I7, I9, I10), whereas there is also a shift in employees' mentality and their risks' awareness (I2, I3, I4, I7, I9, I10, I11).

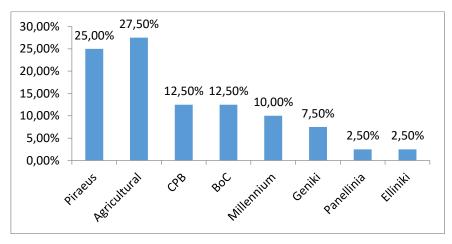
7. What are your recommendations concerning the process of auditing in the bank?

Three participants in the research (I3, I8, I11) did not provide any recommendations, but they answered that the bank should continue with the same process. However, the other respondents provided four important recommendations. The first is that the process of auditing existing in the Bank should be combined with even more on-site / ad hoc (I6, I12) and remote audits (I1, I6, I12). These remote audits should be enriched with operational risk scenarios (I7) and red flags scenarios (I10). The second recommendation is the increase of the advisory character of the audit process (I4, I5, I9). One of the participants stressed the emphasis on the consultative character of the audit through meetings during which relevant case studies and best practices will be presented (I5). The third recommendation referred to the combination of audit process with employee education concerning issues of fraud prevention (I2, I6, I7, I10). Finally, one participant recommended the affability in the relation between the auditor and the auditee, in order this relation to be more effective (I9).

3.6 Results of quantitative research

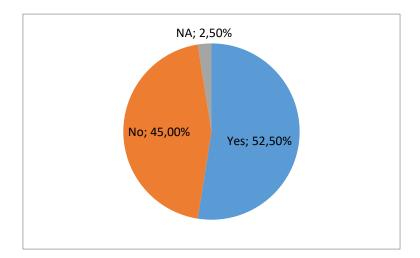
The figure below indicates the bank's network in which the respondents belonged before the integration with Piraeus Bank. As it can be seen, most of the participants belonged to Piraeus Bank (25%) and Agricultural Bank (27.5%).

Figure 3. Bank's network in which the respondents belonged before the integration with Piraeus Bank



As it can be seen from the following figure, 52.5% of the respondents answered that there was a continuous audit in the previous bank in which they worked, compared to 45% who answered negatively.

Figure 4. Percentage of respondents who answered that there was a continuous audit in the previous bank in which they worked



From those who answered positively in the previous question, 45% answered that that there was a follow-up concerning the findings. In the case of a follow-up, the participants answered that finally 83.3% (SD=10.29) of the findings were implemented.

From the following table it can be seen that the participants agree with all the statements concerning the continuous audit process that takes place in the organization in which they work. Higher mean was reported in the statement 'Continuous audit is regarded as an important prevention tool' (M=4.70, SD=0.464). In addition, they tend to disagree with the fact that 'Continuous audit is just a control activity' (M=2.75, SD=1.193), indicating that continuous audit is something more than just a control activity, such as consultancy tool (M=4.50, SD=0.599), and a function that contributes to added value to the organization (M=4.53, SD=0.599), provides support to various auditing services (M=4.45, SD=0.639), helps management (M=4.43, SD=0.675), contributes to the effectiveness and efficiency of the organization (M=4.38, SD=0.586) and to information transparency (M=4.23, SD=0.698).

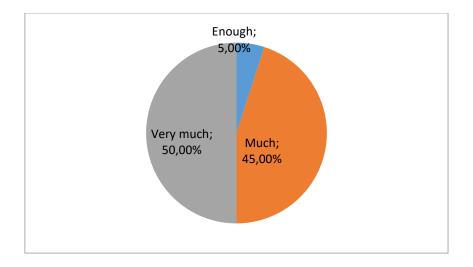
	N	Mean	Std.
			Deviation
Continuous audit serves as a consultancy tool	40	4.50	.599
Continuous audit is just a control activity	40	2.75	1.193
Continuous audit provides support to various auditing services	40	4.20	.648
Continuous audit improves the functions of the organization	40	4.45	.639
Continuous audit contributes to added value to the organization	40	4.53	.599
Continuous audit contributes to information transparency	40	4.23	.698

Table 3. Statements about continuous audit

Continuous audit halps management to be more offective 40	1 12	.675
Continuous audit helps management to be more effective, 40	4.43	.075
since it provides accurate, complete and reliable		
information		
Continuous audit contributes to the effectiveness and 40	4.38	.586
efficiency of the organization		
Continuous audit is regarded as an important prevention 40	4.70	.464
tool		

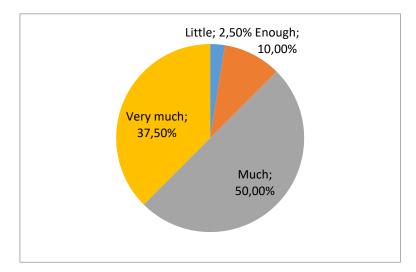
Based on the answers of the participants, continuous audit contributed much (45%) and very much (50%) to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of culture.

Figure 5. Contribution of continuous audit to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of culture



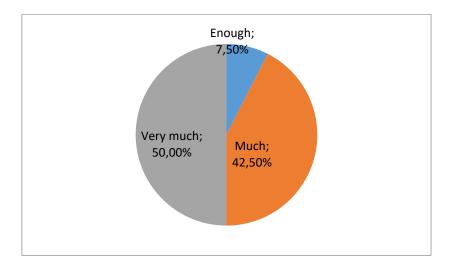
In addition, continuous audit contributed much (50%) to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of operational system.

Figure 6. Contribution of continuous audit to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of operational system



Moreover, continuous audit contributed very much (50%) to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of knowledge.

Figure 7. Contribution of continuous audit to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of knowledge



Overall, 52.5% and 40% of the participants stated that continuous audit is very much and much adequate, respectively, in order to protect the organization from various risks.

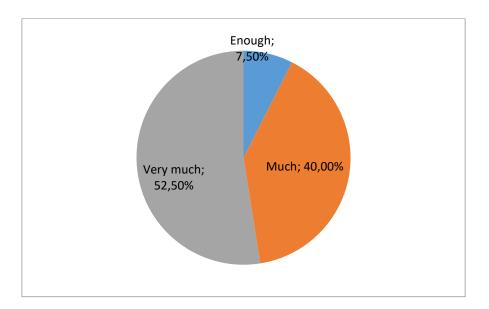


Figure 8. Effectiveness of continuous audit to protect the bank from various risks

The respondents were asked to explain their answer provided in this question. The vast majority answered that continuous audit is very significant in minimizing / avoiding the operational risks of the bank. Some indicatives answers are provided below:

- Addresses areas of interest to senior management, focuses management attention to ensuring good governance, effective risk management and an appropriate control environment, as necessary
- It prevents mistakes and omissions, protects the bank and its employees from operational and fraud risks that may cause financial damage to the bank and its customers and threat the bank' s reputation
- The problem of risk management (especially internal risk) is something that an organization cannot cope with completely. In any case continuous audit is a valuable tool in order to minimize risk
- The continuous audit with the cooperation of the executives of the branches of our bank is adequate in order to protect our organization from various risks, except from rare occasions
- The continuous audit, as it serves as a consultancy tool for the employees, help us to realize where the risk is and try to avoid it. Therefore it serves as a prevention tool for the organization and protects it from various risks

- Continuous audit ensures the homogeneity in business. Also helps to prevent internal fraud because it gives the feeling that there is constant control at all times
- Continuous audit, protects the organization from risks, by helping personnel to understand the rules and the procedures to prevent that risk
- Continuous audit prevents from various risks since it identifies the weakness of the systems and processes of the organization
- Continuous audit provides a safe environment to work in for employees, a reliable Bank for customers, and builds a strong economic organization in our country
- In terms of improving the quality of the data gathered, CA helps a better shaping of a common culture in internal control issues
- Continuous audit protects the organization since it facilitates and educates employees to work with the same guidelines and common culture in order to prevent having high risk situations that finally incur costs to the organization.
- Continuous audit points out the necessity of more accurate implementation of the organization's procedures, as it serves as an effective prevention tool. At the same time, continuous audit serves as a consultancy tool. The existence of both contributes to the organization's protection from various risks

However, there were some participants who claimed the opposite:

- Controls are carried out on the basis of very specific standards set by the bank, not efficient enough to prevent the organization from various risks
- There are some system operations that need to be changed in order to ensure better protection of the organization. Generally, it would help both branches' staff and audit staff if all transactions were performed by more user-friendly systems that operate according to four eyes principle. The implementation of continuous audit protects the employees and the Bank at the same time. The frequency though must be increased to more than once a year. In general the audit is adequate and provides a continuous shield against internal and external fraud
- The continuous audit focuses mainly on financial risk procedures
- Not always protects as long as the human factor exists

The following table presents the descriptive statistics concerning respondents' satisfaction from some features of continuous audit. The participants tend to be satisfied from all the features. The element 'Easiness of understanding' had the higher mean (M=4.48, SD=0.640), whereas the element 'The conduct with an efficient manner with minimal disruption' had the lower mean (M=3.60, SD=0.709).

	Ν	Mean	Std.
			Deviation
How clearly the time-plan and the objectives of audit are	40	4.30	.687
communicated			
The guidelines for its implementation	40	4.18	.712
The presentation of the findings	40	4.15	.834
The time-period for the provision of feedback	38	3.89	.894
The conduct with an efficient manner with minimal	40	3.60	.709
disruption			
The information you receive through this process	40	4.10	.709
concerning observations / issues			
The duration of audit engagements are acceptable	40	4.05	.749
The demonstration of a professional approach on the	40	4.08	.616
way issues are deployed in the report			
The results are presented in an accurate manner	40	4.33	.616
The recommendations made are constructive, creative,	40	4.20	.648
accurate and actionable			
Easiness of understanding	40	4.48	.640
The areas covered	40	4.35	.770

Table 4. Respondents' satisfaction with feature of continuous audit

All of the participants in the research answered that there is a follow-up concerning the findings. From the findings of this follow-up, almost 90.5% (SD=9.64) is implemented.

In general, the participants are much and very much satisfied (95%) from the whole process.

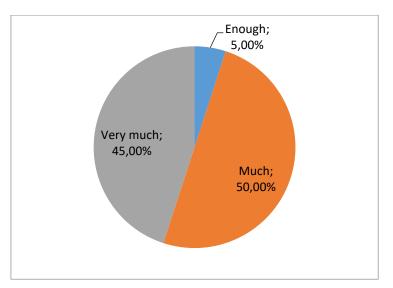
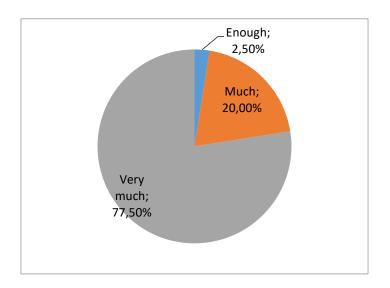


Figure 9. Respondent's satisfaction from the whole process of continuous audit

In general, the implementation of continuous auditing has benefited much and very much (97.5%) the Internal Control System of the branch.

Figure 10. Continuous auditing contribution to the Internal Control System of the branch



The next question examined respondents' opinions about the problems raised during the implementation of continuous audit in the branch. From those answered this question, there were seven (7) persons stated that there are no problems. Most of the participants in the research stated that the problems are: a) the time needed (N=14) and the human resource needed (N=4). Some indicative answers are provided below:

- "The only problem that exists is that the implementation of continuous audit needs considerable working time that conflicts the service of the clients of the branch"
- "It is difficult sometimes to combine the perfect service for the client with the achievement and the protection for the organization from the risk"
- "Mostly time and human resources consumption considering the stressful environment of the branch"
- "The problems that arise during the continuous audit is the selection of days that the audit is performed (i.e. beginning or end of month when the branches are full of customers) and the discomfort it causes due to the need to search in physical archives"

Apart from the lack of time and the workload of employees, there were mentioned some more problems:

- In small branches it is very difficult to follow the rules of the organization by the book
- Since technology is involved, the problems that can be raised are technologyrelated problems concerning the systems that are involved in the daily operations of the branch
- The employees are trying comply with only those procedures that are audited for
- The auditor's communication
- Sometimes the auditors are indifferent about the volume and the requirements daily operations of the branch
- The different instructions received by the auditors. It is common for two different auditors to give different and sometimes contradictive instructions.

The last question sought respondents' recommendations concerning the process of auditing in the branch. Five (5) participants in the research did not provide any recommendations, since the audit process is effective. However, most of the participants in the research provided some recommendations, some of which are the following: audit should take place more frequently and in more areas in order risks to be prevented, the implementation of electronic audit, management should take into account the results of the audit process and implement changes in procedures. In addition, there were some more recommendations, as they are mentioned below:

- It would be much appreciated a real time "hot line" connecting the branches with an audit center
- I recommend to raise the percentage of the e-audit and the offsite audit against onsite audit at the branches
- It would be very constructive if the audit department made recommendations for the improvement of processes in order to eliminate risks as well as for further automation of the control processes
- More time must be given to branches in order to remediate the findings, Simplification and categorization of audit procedures
- In some cases and not always, there are few problems regarding the behavior of the auditors and not with the process of audit
- To be specific according to the procedures, to be helpful according the number of people that needed to process the auditing, to conduct realistic reports of the most serious findings and senior management oversight, implementation approaches that set clear actions and timeframes, and effective monitoring
- A complete identification of the auditors' opinion as far as it concerns the way they deal with the same subjects, having removed the background carried by individuals coming from the merged banks
- Because automation plays a key role to the continuous audit process, my recommendation is focused on a fast and reliable system so that implementation be more effective
- The continuous audit must have an advisory nature in order to be more efficient and proactive. It has to be more frequent due to many areas of control especially in nowadays where the extroversion is needed in order to reach the goals

- Good knowledge of the subject by the auditors and clear indication of any audit finding
- The need for the Bank to understand the particular circumstances that we encounter in serving our major clients
- The auditors should maintain their independency and objectivity of their work throughout the audit process
- Audit process should take place during periods that branch employees have the time to better assist our internal audit colleagues. That would also, give us, the managers, more time to process in detail their findings
- It will be more useful to have more trainings-seminars about the audit results and how to prevent high risk situations
- We all must understand that continuous audit serves as a consultancy tool, and not as a "late" control activity, so the senior management should ensure that the internal audit dept. is kept fully informed of new initiatives, services and products and operational changes to ensure that all associated risks are identified at an early stage. As a proposal for the motivation and continuous training of each internal auditor, will be a training period (about a week per year) in Bank's branches, as a branch executive, just to complete and refresh knowledge and understand the daily routine of the operations. I believe all these are prerequisites for the effectiveness of the Internal Audit Department
- The process of auditing should be frequently implemented. It should serve for educational purposes, as well

Finally, inferential statistics and more precisely correlations were used, in order to examine whether there is difference in respondents' opinions based on the bank in which the belonged before the integration with Piraeus Bank. At first, the data examined for their normality, in order to choose parametric or non-parametric tests. Using Kolmogorov-Smirnov test it was found that the data does not follow normal distribution and hence the non-parametric test of Kruskal-Wallis was used. This test was used since the independent variable has more than two levels. The results indicate that there is no significant correlation (p > 0.05) between respondents' opinion and the bank in which they belonged before the integration with Piraeus Bank.

CHAPTER 4. CONCLUSIONS AND POLICY IMPLICATIONS

This study is the first study, at least to researcher's knowledge, in the Greek context concerning continuous auditing in banks, especially after the merger of various banks, changing the banking environment in Greece. This indicates the theoretical contribution of this study, which is the enrichment of the Greek bibliography in the field of auditing in the banking sector.

All the participants in the research stressed the important contribution of continuous audit to the branches network. Overall it was stressed that continuous audit adds value and can lead to increased effectiveness and efficiency of the organization. More precisely, the respondents claimed that continuous audit has helped the bank in terms of smooth integration of seven different branches in terms of culture, knowledge and operational systems. This has been achieved through homogeneity in work and the common perception of risks, the cultivation of a risk awareness culture, the protection from potential frauds due to the preventive character of continuous audit, and the advisory role of the audit to the management via information diffusion, information transparency and follow-up, which allow the implementation of on-time improvement actions and therapies. The adequacy of continuous audit in protecting the bank from various risks is reflected on the improved audit results annually, as well as on the high percentage of follow-up's findings that are being implemented and the added value offered to the organization.

The above results do not come into contradiction with the findings of previous studies. Several researchers have pointed out the importance of continuous audit concerning the prevention of risks and the provision of added value to the organization (Mihret&Yismaw, 2007; Dal-Ri Murcia et al., 2008; Pantelidis et al., 2011; Mainardi, 2011; Gîrbaci and Mireas, 2011; de Zwaan et al., 2011; Gîrbaci and Mirea, 2011; Holt, 2012; Chambers and Odar, 2015). The advantage of information provision through continuous audit has been found in the study of de Zwaan et al. (2011). In addition, the fact that continuous audit can help the organization to support follow-up which could

lead to the implementation of corrective actions has been also stated from official reports (Deloitte, 2010; GTAG, 2015).

Concerning the problems raised, the participants answered that the time and the staff needed may cause problems in the smooth operation of the bank in terms of servicing customers. This means that continuous audit results in workload, as it is mentioned in the report of Deloitte (2010). In addition, it was referred that controls are not always so efficient in preventing the bank from various risks, since they are mainly focused upon financial risk procedures without placing so much emphasis upon other forms of risks, and since there is still room for improvement, especially in terms of time and human resource needed, the use of technology, the objectivity of the auditor, and the relation between auditee and auditor. The narrow scope of evaluation that is performed has been also mention by Coderre (2005). The fact that employees have stated the issue of technology coincides with the assumption of ISACA (2002) that some organizations may lack the appropriate maturity level in terms of technology.

At a practical level, this study yielded interesting results concerning the suggestions of the respondents for the process of continuous auditing in Piraeus Bank in the future. The participants in the research stressed the need for more on site and remote controls, enriched with operational risk scenarios and red flags scenarios, as well as the increase of the advisory character of the audit process. In addition, the participants suggested the combination of audit process with employee education and training concerning issues of fraud and risk prevention. The use of technology, along with the automation of audit was also mentioned as a suggestion from the participants. The sample applies also for the suggestion of a faster and more reliable system so that implementation of controls can be more effective. These results could be useful to the Bank's management, in terms of implementing actions for the improvement of the audit processes through frequent surveys in managers and employees.

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APPENDIX

QUESTIONS

- 1. What the implementation of continuous audit has offered to the branches network of Piraeus Bank?
- 2. How the implementation of continuous auditing has contributed to the absorption of the branch networks from seven different banks by Piraeus Bank?
- 3. What are the problems raised during the implementation of continuous audit in the bank?
- 4. Do you think that continuous audit, as it is implemented in your bank, is adequate in order to protect the organization from various risks?
- 5. In general, how satisfied are you with the whole process?
- 6. Has the implementation of continuous auditing benefited the Internal Control System of the bank?
- 7. What are your recommendations concerning the process of auditing in the bank?

QUESTIONNAIRE

BRANCH MANAGERS' OPINIONS ABOUT CONTINUOUS AUDITING

You are kindly requested to complete the following questionnaire by marking the box which best applies to your opinions. All the opinions are confidential and no personal information will be required.

Please indicate the Bank's Network you belonged before the integration with Piraeus Bank:

Piraeus	Agricultural	СРВ	BoC	Millennium	Geniki	Panellinia	Elliniki

1. Was there a continuous audit in the previous bank in which you worked? (Continuous audit concerns audit frequency higher than once per year)

Yes	
No	

2. In the case your answer was positive in the previous question, was there a follow-up concerning the findings?

Yes	
No	

- 3. Which percentage of those findings was finally implemented?
- Please state the extent to which you agree with the following statements concerning the continuous audit process that takes place in the organization in which you work, using the following scale: 1=Strongly disagree, 2=Disagree, 3=Neither agree, nor disagree, 4=Agree, 5=Strongly agree

	1	2	3	4	5
Continuous audit serves as a consultancy tool					
Continuous audit is just a control activity					

Continuous audit provides support to various		
auditing services		
Continuous audit improves the functions of the		
organization		
Continuous audit contributes to added value to the		
organisation		
Continuous audit contributes to information		
transparency		
Continuous audit helps management to be more		
effective, since it provides accurate, complete and		
reliable information		
Continuous audit contributes to the effectiveness and		
efficiency of the organisation		
Continuous audit is regarded as an important		
prevention tool		

5. To which extent continuous audit contributed to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of culture?

Not at all	Little	Enough	Much	Very
				much

6. To which extent continuous audit contributed to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of operational system?

Not at all	Little	Enough	Much	Very
				much

7. To which extent continuous audit contributed to the smooth integration of the network of branches from seven different banks absorbed by Piraeus Bank in terms of knowledge?

Not at all	Little	Enough	Much	Very
				much

8. Do you think that continuous audit, as it is implemented in your bank, is adequate in order to protect the organisation from various risks? Please explain your answer.

Not at all	Little	Enough	Much	Very
				much

 Please state how satisfied you are from the following features of continuous audit using the following scale: 1=Not at all, 2=Little, 3=Enough, 4=Much, 5=Very much

	1	2	3	4	5
How clearly the time-plan and the objectives of audit					
are communicated					
The guidelines for its implementation					
The presentation of the findings					
The time-period for the provision of feedback					
The conduct with an efficient manner with minimal					
disruption					
The information you receive through this process					
concerning observations / issues					
The duration of audit engagements are acceptable					
The demonstration of a professional approach on the					
way issues are deployed in the report					
The results are presented in an accurate manner					
The recommendations made are constructive,					
creative, accurate and actionable					
Easiness of understanding					
The areas covered					

10. Is there a follow-up concerning the findings?

Yes	
No	

11. Which percentage of those findings was finally implemented?

12. In general, how satisfied are you with the whole process?

Not at all	Little	Enough	Much	Very
				much

13. In general, has the implementation of continuous auditing benefited the Internal Control System of the branch?

Not at all	Little	Enough	Much	Very
				much

- 14. What are the problems raised during the implementation of continuous audit in the branch?
- 15. What are your recommendations concerning the process of auditing in the branch?